

L7 ANSWER 15 OF 54 CAPLUS COPYRIGHT 2003 ACS
TI Using the analytical reagent and the detectable reagent in microparticle
immobilized form for transport flow matrix-type biospecific assays
AB The invention concerns the transport flow matrix method for immunoassays
that comprises the deposition of the anal. reagent (Capturer) onto the
detection zone of test strip, and the application of the detectable
reagent (Reagent*) onto a zone of the test strip in a form that both
Capturer and Reagent* are immobilized/conjugated to microparticles. The
microparticles are preferably smaller than the smallest inner dimension of
the flow matrix channels; 0.1-100 .mu.m for immobilization of the
Capturer, 0.01-5 .mu.m for the labeling of the Reagent*. Label particles
are fluorescent or colored. Microparticles are silica, polymers,
biopolymers, with hydrophilic groups on their surfaces. The method,
device and test kit are used for immunoassays, preferably for detg. IgE
directed to an allergen, or diagnosis of autoimmune disease. Thus birch
pollen specific IgE was detected from blood. Birch pollen was extd.; the
ext. was either directly applied to the assay strip to form the detection
zone; or was first immobilized onto 0.49 .mu.m polystyrene
microparticles, that were phenyldextran modified; the immobilized
allergen was then applied onto the assay strip. Monoclonal
antibodies to human IgE were conjugated with < 1 .mu.m carbon particles to
form the detectable reagent. Samples, reagent and buffers were pipetted
onto the test strip; concns. of birch pollen specific IgE was detected.
The expts. showed that the same amt. of birch **allergen** deposited
in the form of coupled **particles** gives significantly higher
binding of birch-specific IgE antibodies as compared to when the
allergen is deposited directly on the membrane.
SO PCT Int. Appl., 36 pp.
CODEN: PIXXD2
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